

REMARKS

Claims 1-14 are pending in the present application. Claims 6 and 13 have been cancelled. Claims 1 and 8 have been amended. Accordingly, claims 1-5, 7-12 and 14 are now pending in the application.

The Examiner has objected to the title of the invention as being not descriptive. The Applicant has changed the title to be more descriptive of the invention.

Claims 4-6, and 11-13 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Avery (U.S. Patent No. 6,691,185) in view of Leger et al. (U.S. Patent Number 5,983,291) (hereinafter 'Leger') and in further view of Keller et al. (U.S. Patent Number 6,557,048) (hereinafter 'Keller'). The Applicant respectfully submits that the Keller reference does not qualify as prior art under 35 U.S.C. 103(a). Specifically, the Keller reference would qualify as 102(e) art. However, the Keller reference and the present application were both owned by or subject to assignment to the same entity. The Applicant respectfully requests that Examiner withdraw the rejection.

Claims 1-3, 7-10, and 14 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Avery in view of Leger. The Applicant respectfully traverses this rejection.

The Applicant discloses at page 10 lines 17-23

“Receivers 110 and 120 each receive packet transactions into a receive buffer (not shown). As each transaction is received, a control command is generated containing a subset of the information contained in the received command. The control command may include the Unit Id of the originating node, destination information, a data count and transaction type, for example. It is noted that the control command may include other information or may not include some of the information listed here. The control command is sent to transaction control unit 100.” (Emphasis added)

Applicant also discloses at page 15 lines 3-9

“As described above in conjunction with FIG. 3, each of virtual channel FIFO buffers 410 and 420 may receive control commands from a respective source input such as, for example, receiver 110 or bridge 150 of FIG. 2. The control commands may be placed into virtual channel FIFO buffers 410 and 420 by the type of transaction the control commands represent. Specifically, the control commands may represent either posted, non-posted or response commands and thus the respective posted, non-posted or response queue.” (Emphasis added)

Accordingly, Applicant’s claim 1 recites a control unit of an I/O node for a computer system comprising, in pertinent part:

“a first buffer circuit coupled to receive control commands **corresponding to commands received** from a first source, wherein said first buffer circuit includes a first plurality of buffers each corresponding to a respective virtual channel of a plurality of virtual channels for storing selected control commands that belong to said respective virtual channel;
wherein said plurality of virtual channels includes a posted channel, a non-posted channel and a response channel;
a second buffer circuit coupled to receive control commands **corresponding to commands received** from a second source, wherein said second buffer circuit includes a second plurality of buffers each corresponding to a respective virtual channel of said plurality of virtual channels for storing selected control commands that belong to said respective virtual channel; and
wherein each of said control commands contains a subset of information included within the corresponding commands received by said first source and said second source.”
(Emphasis added)

The Examiner has asserted that Avery teaches each and every element recited in claims 1 and 8. Avery is directed to an apparatus for merging a plurality of data streams into a single data streams. Avery discloses at col. 4 lines 21-23, “These input buffers 331, 332, and 333 store packets having a packet ID that is equal to the ID associated with the input buffer.”

From the foregoing, Avery does not teach or disclose storing “control commands,” particularly “control commands corresponding to commands received from a source” as recited in Applicant’s claim 1.

In addition, Avery does not teach or disclose “wherein each of said control commands contains a subset of information included within the corresponding commands received by said first source and said second source” as recited in Applicant’s claim 1.

Further, the buffers in Avery segregate the packets based on packet ID’s. This is in contrast to the Applicant’s invention. As the Examiner has acknowledged, Avery **does not** disclose that each of the plurality of buffers corresponds to a “respective virtual channel.” The Applicant also asserts that Avery **does not** teach or disclose “said plurality of virtual channels includes a posted channel, a non-posted channel and a response channel” as recited in applicant’s claim 1.

The Examiner asserted that although Avery does not disclose the use of virtual channels, Leger discloses virtual channel buffers. The Applicant respectfully disagrees with the Examiner’s characterization of Leger. Leger is directed toward a system allowing an input port to accommodate a plurality of data frame sub-functions concurrently. Specifically, Leger is directed toward a system in which an ISDN data frame that includes multiple sub-functions/channels may be divided into multiple sub-functions data streams. (See abstract).

First, as disclosed by Leger at col. 1 lines 41-45, “...an ISDN frame is composed of serialized digital signals which are categorized as individual sub-functions/channels such as B1, B2, D, and etc.” Furthermore, Leger discloses at col. 1 lines 47-51

“As illustrated, ISDN frame 200 using GCI interface standard consists of b1,b2, monitor, D, C/I, A, and E sub-functions/channels in this sequential order. Briefly, the B1 and B2 sub-functions may carry either voice or data.”

Leger discloses at col. 4, lines 62-67 “...each SIO ports/CPC channel has four virtual transmit paths and four virtual receive paths. In other words, each SIO ports/CPC channel can handle up to four ISDN frame sub-functions in each direction. A result, the current invention can handle up to 32 ISDN frame sub-functions concurrently.”

From the foregoing, an ISDN frame is a series of serial sequential signals that include multiple functions in one frame. Leger appears to be dividing up each frame into its constituent sub-functions for the purpose of handling greater throughput from a given ISDN connection.

The Examiner asserted that the motivation to combine Leger with Avery is because it would allow a single I/O port to handle multiple sub-functions. The Applicant fails to see how the Examiner's assertion is a proper motivation to combine the references.

Furthermore, even if, *arguendo*, one were to combine the references as the Examiner has suggested one would not obtain the Applicant's invention. Specifically, Leger not only solves an entirely different problem, the Applicant asserts **the ISDN sub-functions (and thus Leger's virtual paths) do not correspond to the Applicant's virtual channels**. As disclosed by the Applicant, the virtual channels are used to prevent transactions from blocking one another in an I/O node. Thus, transactions belonging to the same type (e.g., posted, non-posted and response) are stored in buffers designated for that transaction type. The same goes for the control commands that are generated in response to receiving those transactions. Further, dividing an ISDN frame into its parts and storing the parts individually is not the same as storing "control commands corresponding to commands received from a source" as recited in Applicant's claim 1. Thus, the applicant asserts that the Leger reference may not be combined with Avery to obtain the Applicant's claimed invention.

CONCLUSION

Applicant submits the application is in condition for allowance, and an early notice to that effect is requested.

If any fees are due, the Commissioner is authorized to charge said fees to Meyertons, Hood, Kivlin, Kowert, & Goetzel, P.C. Deposit Account No. 501505/5500-71500/SJC.

Respectfully submitted,



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